CIRC ACCESSION NO--AP0100244
ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. HEXAMETHYLENEDIAMINE (I) IN WATER
FROM NATURAL SOURCES WAS DETD. BY MEANS OF THE FOLLOWING PROCEDURE:
EVAP. 0.5L.WATER SAMPLE IN CAVUUM AT 30-40DEGREES TO 0.5 ML.   APPLY THE
RESIDUE TO THIN LAYER OF ANHYD. AL SUB2 O SUB3 (1-1.5 MM LAYER ON GLASS
PLATE 8 TIMES 12 CM).   DRY 30 MIN IN AIR AND DEVELOP WITH N-BUOH-ACOH-H
SUB2 O MIXT.   USE NINHYDRIN AGENT WITH CUSO SUB4 ADDN. FOR THE
DETECTION AND INCUBATE FOR 15 MIN AT 110DEGREES.   ELUTE WITH MEOH AND
MEASURE THE ABSORBANCE AT 584 MMU.   READ I CONCN. FROM A CALIBRATION
CURVE. SENSITIVITY IS SIMILAR TO 0.02 MG I-1., RELATIVE ERROR SIMILAR
TO 2.8-8.2PERCENT.   THE SAME PROCEDURE WAS USED FOR THE DETN. OF I IN
CONCD. INDUSTRIAL WASTE WATERS FROM SYNTHETIC FIBER PRODUCTION, BUT THE
WATER SAMPLE (0.05-1 ML) WAS APPLIED DIRECTLY TO AL SUB2 O SUB3 PLATES.
SENSITIVITY IS 0.02 MG I, REPRODUCIBILITY 2.6-8.2PERCENT, THE DETN.
TAKES 1.5-2HR.   SAMPLES CONSISTING OF INDUSTRIAL WASTE WATER IN MIXT.
WITH THE SEWAGE WATER FROM HOUSEHOLDS CONTAIN I AND AMINO ACIDS (BEFORE
BIOL. TREATMENT).   A MODIFIED PAPER CHROMATOGRAPHIC PROCEDURE WAS USED:
EVAP. 10-15 ML OF FILTERED WASTE WATER SAMPLE IN WEAKLY ACIDIC MEDIUM TO
0.5 ML, APPLY THE RESIDUE TO CHROMATOGRAPHIC PAPER, DEVELOP WITH PROH-NH
SUB3-H SUB2 O MIXT. (4:1:1), SPRAY WITH 0.2PERCENT NINHYDRIN SOLN. IN ME
SUB2 CO AND INCUBATE FOR 15 MIN AT 80-90DEGREES.   ELUTE I SPOTS WITH 5
ML H SUB2 O AND MEASURE THE ABSORBANCE WITH A YELLOW FILTER.   PREP. A
CALIBRATION CURVE FOR SOLNS. CONTG. 0.005-0.2 MG I, SENSITIVITY SIMILAR
TO 0.005 MG I.

UNCLASSIFIED

DYATLOVITSKAYA, F. G., GLADENKO, Ye. F., and KRUCHININA, A. A.

"Determination Methods of Chloroorganic Insecticides in Reservoir Water"

Translation: A chlorophenyl chlorobenzenesulfonate is extracted from 500 ml
of water with 2x30 ml of C_6H_6, the extract is concentrated by evaporation at
50-60°C, the residue is dissolved in alcohol, saponificated with KOH in
alcohol, acidified, and $p-ClC_6H_4OH$ is removed from it by distillation. The
latter is determined calorimetrically with 4-aminoantipyrine. The determina-
tion sensitivity is 0.2 mg/liter. DDT is also extracted from water with
C_6H_6, the extract is evaporated, the residue is dissolved in alcohol,
evaporated, nitrated, extracted with ether, the extract is neutralized with
alkali, dried over Na_2SO_4, and concentrated by evaporation. The residue
is dissolved in C_6H_6 and condensed with KOH in MeOH. After appearance of a
blue color, DDT is determined calorimetrically. The sensitivity of the
method is 10 µg per sample. Heptachlor and DDT can be also determined by

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USSR

DYATLOVITSKAYA, F. G., et al., Problemy Analiticheskoy Khimii, Vol 2, Moscow, Nauka, 1972, pp 43-46

paper chromatography in the system acetone - water (7:3). Heptachlor is extracted from water with ether. Thin layer chromatography with Al_2O_3 in n-hexane is used for the individual determination of aldrin, dieldrin, hexachlorocyclohexane, and DDT.

2/2

USSR

SIZONENKO, G. A., BOGRETS, G. N., SHUKIS, Z. E., GOKHBERG, Yu. L., KOLO-
DYAZHNYY, A. P., VYKHRIST, N. S., MINAKOV, N. A.

"A Device for Measuring the Thickness of Nonmagnetic Coatings on the Inside
of Pipes"

Translation: This Author's Certificate introduces a device for measuring
the thickness of nonmagnetic coatings on the inside of pipes. The device
contains a micrometer unit, a tubular bar, a movable rod, a force-measuring
spring, and a head with a permanent magnet connected to the movable rod.
The micrometer unit is fastened to the end of the tubular bar which is on
the outside of the pipe to be inspected, and the movable rod is coaxial with
the tubular bar and is coupled to the micrometer unit. The head with perma-
nent magnet is fastened to the end of the tubular bar on the inside of the
pipe to be inspected. As a distinguishing feature of the patent, the device
is designed for improved accuracy in measuring the thickness of coatings on

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SIZONENKO, G. A. et al., USSR Author's Certificate No 329373

the inside of long pipes, and especially those of small cross section. In-
side the measurement head is a modular mechanism made up of two rollers
wound with a flexible thread fastened by one end to the permanent magnet,
and connected by the other end to the force-measurement spring. Also in-
cluded in the device is a microcontact indicator of the position of the
magnet fastened to one of its ends.

2/2

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TITLE--STUDY OF EARLY STAGES OF MAMMALIAN EMBRYOGENESIS WITH INDUCED CHROMOSOMAL ABERRATIONS -U-

UNCLASSIFIED   PROCESSING DATE--04DEC70

AUTHOR--DYBAN, A.P.

COUNTRY OF INFO--USSR

SOURCE--ARKH ANAT GISTOL EMBRIOL 58(1): 7-18. ILLUS. 1970

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--EMBRYOLOGY, CHROMOSOME, RAT, ANIMAL GENETICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605008/E05 STEP NO--UR/9076/70/058/001/0007/0018

CIRC ACCESSION NO--AP0139997

UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DATA ARE PRESENTED ON THE COURSE
OF EARLY STAGES OF RAT EMBRYONIC DEVELOPMENT WITH KARYOTYPE IMPAIRMENT.
NEITHER ANEUPLOIDY, TRISOMY NOR MONOSOMY AFFECT CLEAVAGE AND BLASTOCYST
FORMATION. THEIR INFLUENCE BECOMES EFFECTIVE AT LATER STAGES OF
DEVELOPMENT. CYTOGENETIC EVIDENCE IS CONFRONTED WITH
HISTORADIOAUTOGRAPHIC DATA. A HYPOTHESIS IS ADVANCED THAT AT EARLY
STAGES OF EMBRYONIC DEVELOPMENT IN MAMMALS, AS IS THE CASE IN LOWER
VERTEBRATES, MORPHOGENETIC ACTS ARE EXEMPT FROM IMMEDIATE CONTROL BY THE
ZYGOTE'S KARYOTYPE.   FACILITY: DEP. EMBRYOL., INST. EXP. MED.,
ACAD. MED. SCI. USSR, LENINGRAD, USSR.

UNCLASSIFIED

DYBAN, A. P.

IN VITRO MATURATION OF THE HUMAN OVUM

JPRS 55569
29 Aug 72

[Article by M.A. Petrov-Maslakov, A.P. Dyban, N.A. Samoshkina, A.I. Nikitin, L.I. Parijkyan, Institute of Obstetrics and Gynecology, USSR Academy of Medical Sciences, and Institute of Experimental Medicine, USSR Academy of Medical Sciences, Leningrad; Moscow, Vestnik Akademii Meditsinskikh Nauk SSSR, Russian, No 2, 1972, pp 60-65]

Cytogenetic investigations of human sex cells are of substantial interest both to theoretical and clinical medicine. We know that some congenital pathological states (for example, Down's, Shereshevskiy-Turner, Klinefelter syndromes, and others) are determined by numerical chromosomal aberrations arising in parental sex cells when chromosomes do not separate in meiosis (Penrose, 1954; Lejeune et al., 1959; Lejeune et al., 1960). It was also shown that a considerable number of spontaneous miscarriages is related to chromosomal aberrations formed with nonseparation of chromosomes in meiosis or splitting of the zygote (Carr, 1965; N.P. Bochkov and N.S. Stanova, 1969). In the presence of diseases associated with prolonged fertility (Stein-Leventhal syndrome) impaired maturation of the ovum and degenerative changes therein were demonstrated (A.I. Nikitin and N.A. Samoshkina, 1969, 1970).

Thus, investigation of maturing sex cells brings us closer to understanding the mechanism of chromosome pathology, miscarriages, and some forms of fertility in man.

In addition, one can clearly demonstrate different types of chromosomal anomalies(for example, translocations, inversions, and others) in the meiotic chromosomes of sex cells, which are unnoticeable when analyzing mitotic chromosomes of blood cells and other somatic tissues. In such cases, examination of meiotic chromosomes would permit detection of carriers of chromosomal aberrations, and this has definite diagnostic and prognostic value.

It is not surprising that contemporary cytogenetics is concentrating on the study of human sex cells (Carr, 1969; A.A. Prokof'yeva-Bel'govskaya, 1971).

USSR

UDC 536.24

DYBAN, YE. P., and GLUSHCHENKO, V. G., Institute of Technical Thermophysics, Academy of Sciences Ukrainian SSR

"Heat Transfer and the Flow of Air in the Cascade of Turbine Blades"

Abstract: Experimental results obtained on two types of stationary blades located in a stream of hot and cooling air are compared with the known literature data. In the course of the experiments the following basic parameters were used: the Mach number, from 0.32 to 1.092; the ratio of hot air temperature to the air temperature at the inlet, from 1.3 to 3.58; and Reynolds number, from $2.48 \ 10^5$ to $8.89 \ 10^5$. Discussion and comparison of the experimental data with those obtained by other authors were centered mainly around the following topics: (a) distribution of the local heat-transfer coefficients and of the relative velocities of air along the periphery of blades; (b) heat transfer between the hot air and profiles of the blade cascade; (c) heat transfer between air and the leading edge of the turbine blade; (d) heat transfer in the center of the turbine blade; (e) heat transfer between the air and the outlet edge of the turbine blade; (f) distribution of the local heat-transfer coefficients along the cascade parameters.

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USSR

UDC 536.24:532.526

DYBAN, Ye. P., EPIK, E. Ya., KUROSH, V. D., KOZLOVA, L. G.

"Heat Transfer and the Boundary Layer on a Curved Surface Under Increased Turbulence of the Free Flow"

Translation: Results of experiments on the local and average heat exchange at the surface of a cylinder in a transverse air flow under a constant density of the formal flow over its perimeter are presented. If the turbulence of the incident layer is low (less than 0.5%), the results of experiments on heat exchange in the frontal point satisfactorily agree with the theoretical solution. An attempt is made to analyze the characteristics of the development of the boundary layer and heat transfer under increased turbulence of the flow. The feasibility of introducing the Reynolds number determined on the basis of turbulent pulsation of the velocity into the criterial equation is established. 13 ref. Authors abstract.

1/1

USSR

UDC 536.244

DYBAN, YE. P., Doctor of Technical Sciences, Professor, EPIK, E. YA., Candidate
of Technical Sciences, MAZUR, A. I., FILIPCHUK, V. YE., Engineers

"Heat Exchange in the Presence of Jet Blowing of the Intake Edge of a Turbine
Vane"

Minsk, Izvestiya vysshikh uchebnykh zavedeniy — Energetika, No 5, 1972, pp
90-96

Abstract: The results of studying local heat exchange on the inside surface
of the cavity of the intake edge during symmetric rotation of a plane air jet
($h/B > 1$, $\bar{b} > 0.3$ [$\bar{b} = b/B$ = the relative width of the slot in the nose of the
deflector; h/B is the relative depth of the cavity of the intake edge]) were
discussed previously [Ye. P. Dyban, et al., IFZh, No 5, 1969]. Now, experimental
data are presented on heat exchange in the cavity of the intake edge for asym-
metric rotation of the plane jet and also for discharge of a number of circular
jets into it. The device described by Ye. P. Dyban, et al. was used for the
experiments, and the required visual observations were made in a circulating
system filled with water with the addition of small amounts of colored aluminum
[Ye. P. Dyban, et al., IFZh, Vol XX, No 6, 1971]. The experimental data cover
the heat exchange intensity in the cavity of the intake edge of the turbine
vane of the deflector type blown by a plane air jet for $\bar{b} < 0.27$ and the series
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USSR

DYBAN, YE. P., et al, Izvestiya vysshikh uchebnykh zavedeniy -- Energetika,
No 5, 1972, pp 90-96

of circular jets. The nature of the distribution of the local heat exchange
coefficients along the perimeter of the cavity of the intake edge depends on the
ratio of the jet and cavity dimensions. A comparison of the heat exchange in-
tensity caused by the plane and a series of circular jets among themselves
and with the known data of other analogous studies was made.

The intensity of the heat exchange when blowing the edge with a series
of circular jets and fixed values of l/b equal to the actual and equivalent
widths and identical air flow rates (Re_l = idem) is higher than when blowing
with a plane jet. For example, when l/b = 10 and Re_l = 10^5 and $6 \cdot 10^5$, the
Nusselt numbers for the circular jets exceed those for the plane jet by an
average of 26 and 47% respectively under the experimental conditions. As l/b
is increased, that is, the length of the cooled surfaces increased, under other
equal conditions the difference in heat exchange levels decreases, and when
l/b = 20 the plane jet is in practice equivalent to the series of circular jets
having equal equivalent width.

2/2

USSR

DYCHAKOVSKIY, V. B. and PANIN, I. I.

UDC: 621.372.54

"A Method of Constructing Active Filters of Upper and Lower Frequencies"

Elektron. tekhnika. Nauchno-tekhn. sb. Mikroelektronika (Electronic Engineering, Scientific-Technical Collection, Microelectronics) 1970, No. 2(23), pp 71-76 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A191)

Translation: To obtain a sufficiently high steepness of the amplitude-frequency characteristic of upper and lower frequency filters, a method is proposed for constructing such filters in three stages, the active parts of which are in the form of buffer amplifiers with high input resistance and voltage transfer factors close to unity. A distributed RC circuit is used as the frequency-selecting element. The schematics and the transfer factors for the different types of stages are given. Resume

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1/2   021

UNCLASSIFIED

TITLE--LETILAN-LAVSAN SURGICAL SUTURE MATERIAL -U-   PROCESSING DATE--16OCT70

AUTHOR--DYCHKOVSKIY, A.G.

COUNTRY OF INFO--USSR

SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR5, PP 61-64.

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SURGICAL EQUIPMENT, SUTURE, ANTIBACTERIAL THERAPY, SURGERY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/0584

STEP NO--UR/0589/70/104/005/0061/0064

CIRC ACCESSION NO--AP0108799

UNCLASSIFIED

CIRC ACCESSION NO--AP0108799

UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. ANTIBACTERIAL PROPERTIES OF LETILAN-LAVSAN SUTURE MATERIAL HAVE BEEN STUDIED CLINICALLY AND EXPERIMENTALLY. IT WAS DEMONSTRATED THAT ITS ANTIBACTERIAL PROPERTIES IN THE ORGANISM TISSUES ARE BLOCKED (NOT MANIFESTED PROPERLY). SOME IMPROVEMENTS OF THIS SUTURE MATERIAL ARE GREATLY WARRANTED. FACILITY: FAKUL'TETSKOY KHIRURGICHESKOY KLINIKI IM. S. P. FEDOROVA VOYENNO-MEDITSINSKOY ORDENA LENINA KRASNOZNAMENNOY AKADEMII IM. S. M. KIROVA.

UNCLASSIFIED

USSR

UDC 621.382.2/3

BARYSHNIKOV, G. S., DYGAY, I. V., FURMANSKIY, I. A.

"A Packaging Set for Semiconductor Devices"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 33, Soviet Patent No 285115, class 21, filed 31 Dec 68, published 29 Oct 70, pp 58-59

Translation: This Author's Certificate introduces a packaging set for semiconductor devices with a flange. The device contains a box, a bushing with sockets, and a patch. As a distinguishing feature of the patent, packaging is simplified and productivity is increased by making the box in the form of a parallelepiped which is split parallel to one of its faces, and using a bushing of the same shape with sockets on both its larger faces, these sockets being staggered so that the axes of the sockets in the upper and lower faces of the bushing do not meet. The set includes two cover plates with holes whose diameter is less than that of the flanges on the semiconductor devices.

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Immunology

USSR

UDC 612.017

SHURYGIN, D. Ya., Professor, Col Med Serv. NIKOLAYEVSKIY, V. V., Candidate of Medical Sciences, Lt Col Med Serv, DYGIN, V. P., Doctor of Medical Sciences, Lt Col Med Serv, and KALUZHENKO, R. K., Candidate of Medical Sciences, Lt Col Med Serv

"On the Immunological Reactivity of Military Servicemen"

Moscow, Voyenno-Meditsinskiy Zhurnal, No 2, 1973, pp 61-65

Abstract: Military servicemen were subjected to immunological tests to determine effects of various aspects of service on immunological makeup. Environmental aspects were studied in the first stage: While servicemen in the south of Western Siberia were immunologically normal, those in the north manifested reduced immunological reactivity. Allergic reactions are pronounced in isolated collectives. Low lysozyme, complement, and reactivity were characteristic of individuals in their first 2 months of service. Lysozyme and antibody titers were lowest in April-May. The second stage involved types of combat activity, physical training, and vaccinations: While group antigen and lysozyme titers were higher in daytime than at night during routine duty, the pattern reversed itself during 24-hour duty. Lysozyme decreased and auto-antibodies appeared more frequently after combat exercises. Physical training increased reactivity.

1/3

USSR

SHURYGIN, D. Ya., et al., Voyenno-Meditsinskiy Zhurnal, No 2, 1973, pp 61-65

Autosensitization arose in the 10th-45th days after preventive immunization. The third stage involved harmful environmental factors: While very long electromagnetic waves were not found to cause problems, ultrahigh-frequency fields caused some complement reduction and occasional appearance of antibodies, particularly after long exposure. Immunological reactions in the presence of internal brain injuries and burns were analyzed in the fourth stage: Acute brain injury caused quite pronounced spontaneous blast transformation of lymphocytes and made them cytopathic against homologous fibroblasts for months and years. The same problems arose with burns. Auto-allergic processes played a major role in burn cases. Disease-associated changes were studied in the final stage. Rheumatism caused formation of tissue auto-antibodies to degrees depending on the disease form. Liver auto-antibodies were detected with Botkin's disease in quantities directly correlated with phase and severity of illness. They also appeared with chronic hepatitis and cirrhosis of the liver. Acute and chronic diffuse glomerulonephritis caused production of kidney auto-antibodies. Acute and chronic pneumonia caused pronounced auto-allergies with production of various auto-antibodies, and general reduction of immunological reactivity. Dermatosis disrupted lymphocyte and neutrophil function, as did chronic tonsilitis. Among these diseases, changes in reactivity are probably

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USSR

SHURYGIN, D. Ya., et al., Voyenno-Meditsinskiy Zhurnal, No 2, 1973, pp 61-65

pathogenic only with rheumatism, nephritis, and hepatitis. This information would be helpful in the diagnosis, prevention, and treatment of immunopathy involved with military service.

3/3

USSR   UDC   616.988.75+616.988-06:616.981.25]-06:616.127-092.9

MAKSIMOV, V. A., BALYABIN, A. A., DYGIN, V. P., PERVOMAYSKIY, A. G., and TOPLENINOVA, K. A., Chairs of Faculty Therapy, Microbiology and Pathological Anatomy, Military Medical Academy imeni S. M. Kirov, Leningrad

"Myocardial Lesions in Experimental Influenza and Mixed (Viral-Staphylococcal Infection"

Abstract: EKG examination of mice several days after intranasal infection with influenza Al virus revealed pronounced bradycardia, marked slowing of intraventricular conduction, lengthening of electric systole, and deviation of the electric axis of the heart to the right. Histological study of the myocardium showed evidence of circulatory disorders, edema of connective tissue, and degenerative changes in the muscle fibers. Influenza combined with staphylococcal infection produced more severe degenerative and inflammatory changes in the myocardium. Similar changes occurred when staphylococcal infection preceded influenza.

1/2

USSR

MAKSIMOV, V. A., et al., Patologicheskaya Fiziologiya i
Eksperimental'naya Terapiya, No 1, 1971, pp 21-25

In the 3rd week of the mixed infection, antibodies to the heart
were found in the serum of several animals whose EKG's showed
substantial changes caused by inflammatory and sclerotic phe-
nomena in the myocardium. This suggests that autoimmune
mechanisms may be involved in the myocardial lesions resulting
from mixed influenza and staphylococcal infection.

2/2

UNCLASSIFIED

TITLE—THE VELOCITY OF SIGNAL AND THE METRICS OF SPACE TIME IN NONLINEAR ELECTRODYNAMICS —U—

PROCESSING DATE—09OCT70

AUTHOR-(02)-DYK, O.V., KHYEU, N.V.

COUNTRY OF INFO—USSR

SOURCE—TEORETICHESKAYA I MATEMATICHESKAYA FIZIKA, 1970, VOL 2, NR 1, PP 55-66

DATE PUBLISHED———70

SUBJECT AREAS—PHYSICS

TOPIC TAGS—QUANTUM ELECTRODYNAMICS, ELECTROMAGNETIC FIELD, SIGNAL DETECTION, LORENZ TRANSFORMATION, LAGRANGE EQUATION

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED

PROXY REEL/FRAME—1978/1228

STEP NO—UR/0646/70/002/001/0055/0066

CIRC ACCESSION NO—AP0046151

UNCLASSIFIED

CIRC ACCESSION NO--AP0046151   UNCLASSIFIED   PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IT IS SHOWN THAT IN NONLINEAR ELECTRODYNAMICS THE VELOCITY OF A SMALL TIME DEPENDENT PERTURBATION, WHICH CAN BE CONSIDERED AS A SIGNAL, IN THE PRESENCE OF AN EXTERNAL FIELD DEPDENDS UPON THE INTENSITY OF THE LATTER AND CAN BE GREATER THAN THE LIGHT VELOCITY IN A VACUUM. AS A CONSEQUENCE, THE SUCCESSION OF THE EMISSION AND THE DETECTION ACTS FOR THE SIGNAL DEPENDS UPON THE FRAME OF REFERENCE, IF THE USUAL FORM OF THE LORENTZ TRANSFORMATIONS IS VALID. THE POSSIBILITY IS DISCUSSED OF AVOIDING THIS DIFFICULTY BY MEANS OF INTRODUCING OF THE SPACE TIME METRICS DEPENDING ON FIELD OR INTRODUCING A CERTAIN SELECTION PRINCIPLE EXLUDING THE NONLINEAR LAGRANGIANS WHICH MAKE IT POSSIBLE FASTER THAN LIGHT SIGNALS.

UNCLASSIFIED

DYKHNENKO, L. M., KRYUKOVA, N. A., and MATVEYEVA, L. T.

"Device for Transmitting Digital Information from an Electronic Computer to a Controlled Object"

Moscow, Pribory i Tekhnika Eksperimenta, No. 3, 1971, pp 84-86

Abstract: This article describes an instrument capable of receiving a 20-digit parallel potential binary code from an electronic computer, transforming the code into a sequential paraphase pulse code, transmitting this code over a two-conductor coaxial line to a device for transforming the sequential code into a parallel one, and finally transmitting the code to an object controlled by the computer. The instrument has unit time synchronization for realizing the control algorithm, during which it can put out 105 control words containing the three-bit address of the object, the four-bit address of the activating device in the selected object, and a 13-bit information word for the activating device. A block diagram of the whole system is given, plus diagrams of the section for converting the parallel potential code into the pulse paraphase sequential code, and the seven-unit section for information reception and distribution. The components of most of these sections consist of the "Logik" silicon integrated circuits, types 1LB 211A-D. Silicon transistors types 2T312A-C are also used.

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Water Treatment

USSR

UDC 628.16.094.9

MIRKIS, I. M., DYKHNO, A. Yu., MIKHAYLOV, I. P., MITLITSKIY, G. A., and KEGAMYAN, Yu. Sh.

"Removal of Calcium From Caspian Sea Water by Ion Exchange"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 10, 1972, pp 1-5

Abstract: Three types of sediments form during evaporation of sea water: calcium carbonate, magnesium hydroxide and calcium sulfate. The first two precipitate due to the presence of carbonate and bicarbonate ions whose content is rather low in comparison to other sediment-forming ions. Pilot plant studies were carried out with Caspian Sea water in an attempt to develop preventive measures against formation of sediment in the evaporators, by means of the decomposition of carbonates formed with acid, followed by removal of the calcium with the ion exchange technique. Scrubbed water was used for the regeneration of cation exchange resin. It was shown that it is possible to carry out a long-lasting cyclic process. The technology of such a process was developed. Effective exchange capacity of sulfonated coal and cation exchange resin KU-2 was determined.

1/1

Water Treatment

USSR

DYKHNO, A. Yu., KEGAMYAN, Yu. Sh., MALYSHEVA, A. E., MITLITSKIY, G. A., and SENDEROVICH, A. E.

UDC 542.48.003.1

"Technological and Economical Comparison of Two Multipurpose TETs [Heat and Electric Power Stations] for Distillation of Sea Water"

Moscow, Vodosnabzheniye i Sanitarnaya Tekhnika, No 1, 1972, pp 2-5

Abstract: Results of performance, maintenance cost, reliability, and the cost of distilled water for two types of distillation plants (A and B) are analyzed. Plant A is equipped with separate zones for water boiling and uses seed crystals for reducing the formation of low-temperature boiler scale, consisting mainly of calcium carbonate and magnesium hydroxide.

Plant B operates by the open cycle principle with the feeding of vapor generators with demineralized sea water. Both plants produce electrical energy, steam, and distilled water. The cost of distilled water is 59 and 86 kopeks/ton water for plants A and B, respectively, with an electrical energy consumption of 66 kopeks/kwatt/hour.

1/1

USSR

MEN'SHIKOV, D. D., DYKHNO, M. M., KOCHEMASOVA, Z. N., BYKOV, A. S., and TYURIN, V. S., Chair of Microbiology, First Moscow Medical Institute imeni I. M. Sechenov

UDC 576.852.211.094

"Ultrastructure of Drug-Sensitive and Drug-Resistant Mycobacterium Tuberculosis"

Abstract: Electron-microscope study was conducted of five M. tuberculosis strains differing in resistance to such drugs as streptomycin, PAS, cyclo-serine, etc., to determine whether ultrastructural characteristics are related to drug sensitivity. The strains used were the stock strain 1646 and Nos 686, 946, 827, and 551 isolated from tuberculosis patients treated with tuberculostatic agents. While the strains differed from one another in electron density, thickness of the cell wall, presence of extracellular granules, and number of vacuoles, no correlation could be detected between any of these morphological features and sensitivity or resistance to drugs. For example, heavily vacuolated cells were found in both the sensitive strain 686 and in strain 551, which is particularly resistant to PAS and isoniazid.
1/1

USSR

GUREVICH, S. M., Doctor of Technical Sciences, ZAMKOV, V. N.,
Candidate of Technical Sciences, PRILUTSKIY, V. P., TOPOL'SKIY,
V. F., and DYKHNO, S. L., Engineers

UDC 621.791.754.546.821

"ANT-23A Flux for Argon-Arc Welding of Titanium Alloys"

Abstract: Argon-arc welding is often used for the manufacture
of structures from titanium alloys. Use of the ANT-17A flux per-
mits one-time operation thus ensuring its wide-spread application.
However this flux has certain disadvantages in welding thin-sheet
metal below 5 mm. Thus the ANT-23A flux has been developed as a
highly effective medium to replace the ANT-17A. Using the ANT-
23A it is possible to carry out a second welding without first
cleansing the surface. Adhesion of the flux and the titanium is
much lower and the slag film can be easily removed with a steel
brush. The mechanical properties of the joints correspond to
those of the base metal. The flux has successfully undergone
testing under industrial conditions and is being used in the com-
mercial production of titanium products.
1/1

172   010

UNCLASSIFIED

TITLE--PH CHROMATOGRAPHY ON PAPER IN DETERMINATION OF DISSOCIATION CONCTANTS FOR ANTIBIOTICS OF OLIVOMYCIN, MITRAMYCIN GROUP -U-.

PROCESSING DATE--16OCT70

AUTHOR-(03)-ILLARIONOVA, R.P., DYKHOVICHNAYA, D.YE., BONDARENKO, B.N.

COUNTRY OF INFO--USSR

SOURCE--ANTIBIOTIKI, 1970, VOL 15, NR 5, PP 415-418

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PAPER CHROMATOGRAPHY, ANTIBIOTIC/(U)MITRAMYCIN ANTIBIOTIC, (U)CHROMOMYCIN ANTIBIOTIC, (U)OLIVOMYCIN ANTIBIOTIC,

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1994/0155

STEP NO--UR/0297/70/015/005/0415/0418

CIRC ACCESSION NO--AP0114551

UNCLASSIFIED

CIRC ACCESSION NO--AP0114551   UNCLASSIFIED

PROCESSING DATE--16OCT70

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. A METHOD FOR DETERMINATION OF DISSOCIATION CONSTANTS OF ANTIBIOTICS, SUCH AS OLIVOMYCIN, MITRAMYCIN, CHROMOMYCIN AND AURELIC ACID IS DESCRIBED. THE METHOD IS BASED ON DEPENDANCE OF R SUBF VALUES ON PAPER PH CHROMATOGRAMS UPON PK, HYDROGEN ION CONCENTRATION, DISTRIBUTION COEFFICIENTS OF THE SUBSTANCES IN WATER AND ORGANIC PHASES.   FACILITY: KIEV INSTITUTE FOR EPIDEMIOLOGY MICROBIOLOGY AND PARAZITOLOGY.

UNCLASSIFIED

1/2   043   UNCLASSIFIED   PROCESSING DATE--13NOV7C
TITLE--COMPARATIVE EVALUATION OF THE DANGER OF IMPACT PULSES PRODUCED BY
   POLYURETHANE FOAM GASKETS AT TEST TEMPERATURES OF POSITIVE 20DEGREES AND
AUTHOR-(02)-GORELOV, V.A., DYKIN, V.I.

COUNTRY OF INFO--USSR

SOURCE--IZV. VYSSH. UCHEB. ZAVED. MASHINOSTR. 1970, (2), 24-7

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--SHOCK WAVE, POLYURETHANE RESIN, FOAM PLASTIC, LOW TEMPERATURE
   EFFECT, SHOCK ABSORBER, ELECTRONIC EQUIPMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1116   STEP NO--UR/0145/70/000/002/0024/0027

CIRC ACCESSION NO--AT0134802
                         UNCLASSIFIED

CIRC ACCESSION NO--AT0134802
ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. SHOCK WAVES EXERTED ON
  POLYURETHANE (I) FOAM GASKETS AT NEGATIVE 60DEGREES WERE 50PERCENT MORE
  DANGEROUS THAN THOSE EXERTED ON I AT ROOM TEMP.   DETN. OF A MAX. SHOCK
  RESISTANCE ANDDESIGN OF APPROPRIATE SHOCK ABSORBERS (USED TO PROTECT
  ELECTRONIC DEVICES IN TRANSPORT) WERE DISCUSSED.

UNCLASSIFIED

1/2   026   UNCLASSIFIED   PROCESSING DATE--04DEC70
TITLE--MICROWAVE CONDUCTANCE IN CONSTANT ELECTRIC AND MAGNETIC FIELDS FOR
   A PARABOLIC LAW OF CARRIER ENERGY DISSIPATION -U-
AUTHOR-(02)-ALMAZOV, L.A., OYKMAN, I.M.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA TVERDOGO TELA, VOL. 12, MAR. 1970, P. 814-819

DATE PUBLISHED----MAR70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MICROWAVE, KINETIC EQUATION, ELECTRIC CONDUCTIVITY, CONSTANT
   MAGNETIC FIELD, ELECTRIC FIELD, CYCLOTRON FREQUENCY, TENSOR ANALYSIS,
   CRYSTAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1463   STEP NO--UR/0181/70/012/000/0814/0819

CIRC ACCESSION NO--AP0112457
                            UNCLASSIFIED

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. CALCULATION OF THE MICROWAVE
CONDUCTANCE TENSOR IN CRYSTALS WITH A NONPARABOLIC LAW OF CARRIER ENERGY
DISSIPATION IN THE PRESENCE OF CROSSED CONSTANT ELECTRIC AND MAGNETIC
FIELDS. THE ANALYSIS IS PERFORMED ON THE BASIS OF A KINETIC EQUATION
LINEARIZED WITH RESPECT TO THE ELECTRIC FIELD. IT IS FOUND THAT IN THE
PRESENCE OF AN ELECTRIC FIELD, AN ISOTROPIC BUT NONPARABOLIC ENERGY
DISSIPATION LAW LEADS TO THE APPEARANCE OF ADDITIONAL TERMS IN THE
CONDUCTANCE TENSOR, WHICH ARE OF RESONANT NATURE AT THE CYCLOTRON AND
DOUBLE CYCLOTRON FREQUENCY.   FACILITY: AKADEMIIA NAUK UKRAINSKOI
SSR, INSTITUT POLUPROVODNIKOV, KIEV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

DYKMAN, M. I.

"Quantum Theory of Spectral Distribution of Isolated Nonlinear Vibrations Near Combined Frequencies"

Leningrad, Fizika Tverdogo Tela, Vol 15, No 4, 1973, pp 1075-1079

Abstract: The time correlation function of isolated (for example, local or quasilocal) nonlinear vibrations interacting with the medium and its spectral representation in the combined frequency range are defined in the case of an arbitrary relation between the nonequidistance of the vibrational state levels, caused by the nonlinearity, and their inverse lifetime. By using the operator ordering technique to exclude the coordinates of the medium selected in the form of a system of harmonic oscillators and the asymptotic perturbation theory, the spectral distribution was obtained in the form of the integral of an elementary function. A study was made of the form of the spectral distribution and its fine structure. For sufficiently great nonlinearity the spectrum comprises a series of lines the widths of which depend linearly on their number. The fine structure of the spectrum exists in a defined temperature range outside which the distribution is, in practice, smooth.

1/1

USSR   UDC   621.317.8

SAFONOVA, S. G., DYKOV, Yu. A.

"Prediction of the Storage Life and Amount of Change in Electrical
Resistance During Aging of Microwire Resistors"

V sb. Mikroprovod i pribory soprotivl. (Microwire and Resistance Devices
--collection of works), vyp. 7, Kishinev, 1971, pp 171-181 (from RZh-
-Radiotekhnika, No 8, Aug 71, Abstract No 8V364)

Translation: The article is devoted to creating a method of accelerated
tests for aging during storage of miniature resistors made from cast
insulated microwire. The selection of forced conditions is discussed;
the characteristics of the selected conditions are presented. A special
thermostatically controlled chamber was made for the tests. A procedure
is outlined for predicting storage life from test data. Results are
presented from testing of a series of resistors, showing their compara-
tively high stability. Five illustrations, two tables, bibliography
of five titles.

1/1

1/2   040

UNCLASSIFIED

TITLE--EXPERIMENTAL STUDY OF ISOTHERMAL TURBULENT FLOW IN A RECTANGULAR
    CHANNEL WITH BLOWING ON ONE SIDE -U-

PROCESSING DATE--13NOV70

AUTHOR-(03)-PALEYEV, I.I., AGAFONOVA, F.A., DYMANT, L.N.

COUNTRY OF INFO--USSR

SOURCE--MINSK, IZVESTIYA VYSSHIKH UCHEBNYKH ZAVEDENIY, ENERGETIKA (NEW OF
    HIGHER EDUCATIONAL INSTITUTIONS, ENERGETICS), 1970, NO 1, PP 65-70

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--FLOW PROFILE, TURBULENT FLOW, FLOW VELOCITY, ENERGY SPECTRUM,
    WAVE NUMBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/0550

STEP NO--UR/0143/70/000/001/0065/0070

CIRC ACCESSION NO--AT0052021

UNCLASSIFIED

CIRC ACCESSION NO--AT0052021   UNCLASSIFIED   PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. RESULTS ARE PRESENTED OF
MEASUREMENTS OF THE LONGITUDINAL AVERAGED AND PULSATION VELOCITY
PROFILES OF TURBULENT FLOW AT SEVERAL SECTIONS OF A RECTANGULAR CHANNEL
FOR MODERATE BLOWING THROUGH THE POROUS LOWER WALL. A METHOD FOR
CALCULATING THE AVERAGE LONGITUDINAL VELOCITY IS PROPOSED ON THE BASIS
OF THE EMPIRICAL RELATIONS OBTAINED. RESULTS ARE PRESENTED OF A
SPECTRAL ANALYSIS OF THE LONGITUDINAL PULSATION VELOCITY IN THE FORM OF
THE DEPENDENCE OF THE ENERGY SPECTRAL FUNCTION PSI ON THE WAVENUMBER K.

UNCLASSIFIED

USSR

UDC 577.486

DYLIS, N. V.

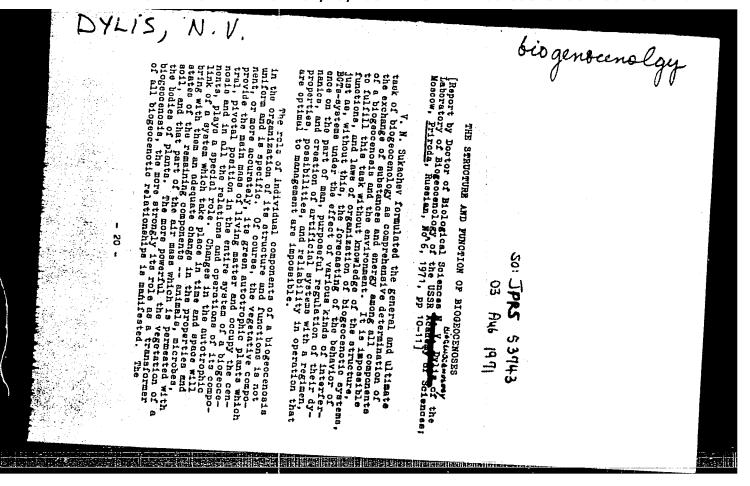"The Present Status of Biogeocenological Research in the USSR"

Abstract: USSR work in the field of biogeocenology is reviewed. It is brought out that this work is based on the theories of V. N. Sukachev. It was initially conducted by the Forest Institute, Academy of Sciences USSR, under the direction of Sukachev, who was founder of this institute. Later on it was taken over by the Laboratory of Forest Planting, Academy of Sciences USSR. It is at present conducted by local stations of this laboratory and other organizations, some of which are branches of the Botanical Institute, Academy of Sciences USSR. The work done at most of the local stations and units is not sufficiently comprehensive. An exception is the station of the Laboratory of Forest Planting at the Tellerman Experimental Forestry Reserve in Voronezhskaya Oblast. The head of this station, A. A. Molchanov, compiled a general scheme of the exchange of substances between components of oak biogenocenoses, which is expressed in energy units. This is a hitherto unequaled achievement of analytical biogenocenology. The original task of local stations

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USSR

of the Laboratory of Forest Planting was planting of shelter belts for the protection of fields; this has influenced the work of these stations in southern regions. Northern stations that are active under the Ural Affiliate of the Academy of Sciences USSR are engaged in work on tundra biogeocenoses. In connection with the transfer to Krasnoyarsk of the Forest Institute, Academy of Sciences USSR, work on forest biogeocenoses in Siberia has expanded. Almost no research has been done on meadow and agricultural biogeocenoses, which are of importance for the national economy.

2/2

DYLIS, N. V.

biogenocenolgy

So: JPRS 53943
03 Aug 1971

THE STRUCTURE AND FUNCTION OF BIOGEOCENOSES

V. N. Sukachev formulated the general and ultimate task of biogeocenology as comprehensive determination of the exchange of substances and energy among all components of a biogeocenosis and the environment. It is impossible to fulfill this task without knowledge of the structure, functions, and laws of organization of biogeocenotic systems, just as, without this, the forecasting of the behavior of BCGs-systems under the effect of various kinds of interference on the part of man, purposeful regulation of their dynamics, and creation of artificial systems with a regimen, properties, possibilities, and reliability in operation that are optimal to management are impossible.

The role of individual components of a biogeocenosis uniform and is specific. Of course, the vegetative component, or more accurately, its green autotrophic component, provide the main mass of living matter and occupy the central, pivotal position in the entire system of a biogeoce-nosis and in all the relations and operations of its compo-nents, plays a special role. Changes in the autotrophic link of a system which take place in time and space will bring with them an adequate change in the properties and states of the remaining components -- animals, microbes, soil, and that part of the air mass which is permeated with the bodies of plants. The more powerful the vegetation of a biogeocenosis, the more strongly its role as a transformer of all biogeocenotic relationships is manifested. The

- 20 -

USSR

DYL'KO, N. I.

UDC 619.614.449.57

"Investigating the Usefulness of Entobacterin and Boverin for Biological Control of Mosquito Larvae"

Minsk, Izvestiya Akademii Nauk BSSR, No 4, 1971, pp 85-89

Translation: Thirty-one laboratory tests were performed to study the feasibility of biological preparations for combating mosquito larvae. Under the natural conditions prevailing in Belorussia, entobacterin in concentrations of 0.12-86 million Bac. thuringiensis spores per milliliter of water in the natural habitat exerts no significant lethal effects on the larvae of the Chaoborinae and Culicinae mosquitoes. Boverin in con- centrations of 120-240 million spores of the Beauveria bassiana fungus per milliliter of water kills all Culex apicalis and C. exilis larvae. In the control tests, 53% of the larvae died, while 47% eventually produced winged mosquitoes.

1/1

USSR

UDC 621.357.7:669.38

DYMARSKAYA, P. I., GEREIIROT, YU. YE., EYCHIS, A. P., Ukranian Scientific-Research Institute of Local Industry

"Study of Corrosion Resistance of Nickel and Copper-Nickel Coatings"

Abstract: The authors studied the corrosion resistance of coating systems containing copper and nickel in order to estimate the effectiveness of a copper sublayer and possibility of using shiny nickel as the copper layer. The coatings were tested over steel under natural conditions for one year. It is concluded that a copper sublayer produced from ethylene diamine and tartrate electrolytes improves the protective properties of nickel coatings. At a thickness of 18 μ, the copper-nickel coatings are equal in corrosion resistance to binickel coatings. In spite of the greater electrochemical activity of shiny nickel coatings, they protect steel from corrosion better than matte polished coatings. Shiny nickel coatings cannot be used for outer surfaces of products used under atmospheric conditions, however. A thin layer of chromium does not improve the protection of steel from corrosion, but improves the durability of the decorative appearance of the coating.

1/1

USSR

UDC 678.652'41'21-9

SHARKOVSKIY, V. A., AKUTIN, M. S., KERBER, M. L. SHCHEGLOV, L. L.,
MATVELASHVILI, G. A., PUKHOVITSKAYA, A. N., MILL', L. I., GREBENNIKOV,
A. V., OSTROVSKAYA, A. YE., and DYMARSKAYA, YE. L.

"New Types of Aminoplastics"

Moscow, Plasticheskiye Massy, No 12, Dec 70, pp 53-54

Abstract: The article describes synthesis of fiberglass plastics
based on carbamide binders. These binders include a carbamide oli-
gomer modified by polyvinylacetate emulsion during synthesis, and
ures-benzoguanamine-formaldehyde oligomer. Fiberglass textolites
based on these oligomers and TS-8/3-250 glass treated with lubricant
752 are mechanically strong. In addition to its excellent strength
properties, the plastic based on urea-benzoguanamine-formaldehyde
oligomer is also water-resistant.

1/1

1/2   012   UNCLASSIFIED   PROCESSING DATE--20NOV70
TITLE--MILITARY AND PATRIOTIC EDUCATION OF STUDENTS OF THE MEDICAL
INSTITUTE -U-

AUTHOR-(03)-KAZANTSEV, V.V., VARANOVSKIY, YA.M., DYMCHENKO, D.D.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, NO 3, 1970, PP 16-18

DATE PUBLISHED--------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--MEDICAL TRAINING, MEDICAL INSTITUTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0410   STEP NO--UR/0177/70/000/003/0016/0018

CIRC ACCESSION NO--AP0134178
                           UNCLASSIFIED

CIRC ACCESSION NO--AP0154178   UNCLASSIFIED   PROCESSING DATE--20NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PRESENT ARTICLE WE WOULD
LIKE TO SHARE EXPERIENCE IN THE MILITARY AND PATRIOTIC EDUCATION OF
STUDENTS OF THE LENINGRAD SANITARY HYGIENIC MEDICAL INSTITUTE. THAT
WORK IS PLANNED AND ORGANIZED BY THE PARTY AND KOMSOMOL COMMITTEES AND
ALSO BY THE TRADE UNION ORGANIZATIONS. A LARGE ROLE IN THE
IMPLEMENTATION OF THE TASKS OF MILITARY AND PATRIOTIC EDUCATION BELONGS
TO THE CHAIRS OF THE SOCIAL SCIENCES AND ALSO TO A NUMBER OF CLINICAL
AND THEORETICAL CHAIRS WHOSE PROGRAM OF INSTRUCTION INCLUDES CERTAIN
APPLIED MILITARY AND MAINLY MILITARY MEDICAL ASPECTS.

UNCLASSIFIED

USSR   UDC 661.1:542.65:539.23:539.24

DYMCHENKO, N. P., SHISHLYANNIKOVA, L. M., YERMAKOV, N. I., and URAZALIYEV, U. S., Moscow State Pedagogical Institute imeni V. I. Lenin and Moscow Oblast Pedagogical Institute imeni N. K. Krupskaya

"Electron-Optical and X-ray Diffractometric Study of St-50-1 Sital Substrate Structure"

Abstract: Electronography, electron microscopy, and x-ray diffractography were used to study phase composition and substructure of the surface layers in ST-50-1 sital substrates. It was found that sital films deposited on unheated substrate bases were quite different from those deposited on heated bases. For crystalline TiO_2 (rutile), a small size of coherent scattering regions and mean-square microdeformations were characteristics in the sital. In relation ot crystallographic direction, characteristic for crystalline TiO_2 in sital, anisotropy of the sizes of coherent scattering regions and magnitude of mean-square micro-deformations are pronounced. It was suggested that in the formation of thin films, the phase and micro-structural heterogeneities of the sital surface layers are conducive to electrical defects and lead to a nonuniform distribution of electrical defects in the film condensates. Two figures, nine bibliographic references.
1/1

USSR

DYMCHENKO, N. P., SHISHLYANNIKOVA, L. M., YERMAKOV, N. I., URAZALIYEV, U S
ZAUMYSLOV, YU. V., and MOCHALOV, A. I., Moscow State Pedagogical Institute
imeni V.I. Lenin and Moscow Oblast Pedagogical Institute imeni N. K. Krupskaya

"X-Ray Diffractometric Study of Grade St-50-1 Sital Substrate Phase
Composition"

Abstract: Three batches of grade ST-50-1 sital substrates from industrial
production were investigated as to reproducibility of phase composition from
point to point on one substrate for each of the three batches, then on
reproducibility of phase composition from substrate to substrate in the
first, second, and third batches, respectively. Sital ST-50-1 is an
oxide composition containing (in %): 60 SiO_3, 13 Al_2O_3, 9.5 MgO, 7.5 CaO,
and 9.0 TiO_2. Careful analysis of the x-ray diffractograms revealed that,
in addition to an amorphous phase, the ST-50-1 sital substrate has two other
phases: TiO_2 in the form of rutile and $MgSiO_3$ (clinoenstatite). Reproduci-
bility from substrate to substrate in a batch and from batch to batch was good.
Three-hour heat treatments at 200, 400, and 600°C had no effect on sital sub-
strate composition. One figure, one table, three bibliographic references.
1/1

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USSR   UDC 621.762:669.018.24(088.8)

DYNCHENKO, V. A., and RUBAN, N. A.

"Cermet Antifriction Material"

USSR Author's Certificate No 254093, filed 11 Mar 68, published 20 Mar 70
(from RZh-Metallurgiya, No 11, Nov 70, Abstract No 11G355)

Translation: A cermet antifriction material based on Cu, containing 10-12%
Rb, 9-10% Sn, and 15-16% graphite designed for work under the conditions of
dry friction, is proposed. The material is produced by compacting a mixture
of powders of starting components under a pressure of $\sim$ 6 t/cm^2 and sintering
at 780° over a period of 1 hr, and thereafter at 280° over a period of one-
half hour. The material possesses the following mechanical properties: HB =
28-30 kg/mm^2, σ_β during compression = 11-13 kg/mm^2, a_H = 0.05-0.07 kgm/cm^2,
and friction coefficient of 0.15-0.18. 1 table.   I. Brokhin

1/1

- 29 -

USSR   UDC   621.762.001:669.1'26'784

DYMCHENKO, V. A., Kramatorsk Scientific Research, Planning and Technological Institute of Machinery Manufacture

"Investigation of P/M Iron-Orthorhombic Chromium Carbide System"

V sb. Materialy II Nauchno-tekhn. konferentsii Kramatorsk. n.-i. i proyektno-tekhnol. in-ta mashinostr., 1969 (Materials of Second Scientific and Technical Conference of Kramatorsk Scientific Research, Planning and Technological Institute of Machinery Manufacture, 1969 -- Collection of Works), Kramatorsk, 1970, pp 27-28 (from RZh-Metallurgiya, No 3, Mar 71, Abstract No 3G380 by S. Bobrova)

Translation: In the alloying of P/M materials with the orthorhombic carbide Cr_3C_2 the furnace atmosphere needs no additional drying. Homogenization of the alloy is achieved more rapidly than if elemental Cr is used. As a result of the interaction of Cr_3C_2 and Fe at 350-400° (Cr, Fe)$_7C_3$ is formed, and liberated Cr dissolves in Fe. After saturation of (Cr, Fe)$_7C_3$ with iron, re-crystallization thereof into hexagonal carbide (Cr, Fe)$_7C_3$ takes place, which puts the system into a more stable state. The dissolvability of Cr_3C_2 in iron on sintering in a moisture-containing atmosphere is due to morphological changes taking place in the system during sintering. One table.
1/1

USSR

UDC: 519.4:517:513.88

DYMENT, D. A., SOBOLEVSKIY, P. Ye.

"On Coercive Solvability of the Cauchy Problem for Parabolic Differential Equations in a Banach Space"

Tr. NII Mat. Voronezh. un-ta (Works of the Scientific Research Institute of Mathematics, Voronezh University), 1970, vyp. 1, pp 60-72 (from RZh-Matematika, No 5, May 71, Abstract No 5B897)

Translation: Let E be a Banach space; $A(t)$, $t \in [0, T]$, a family of linear operators in E which generates an analytic subgroup with exponentially decreasing norm, such that for some $\rho \geqslant \frac{1}{2}$ the domain of $A^\rho(t)$ is constant. Let $C_0^\alpha (0 < \alpha < 1)$ be the complement of a space of continuously differentiable functions $\phi(t)$ on $[0,T]$ with values in E with respect to the norm

$$\|\varphi(t)\|_{C_0^\alpha} = \max_{[0,T]} \|\varphi(t)\|_E + \sup_{0 < t < t+\Delta t < T} \|\varphi(t+\Delta t) - \varphi(t)\|_E t^\alpha (\Delta t)^{-\alpha}.$$

In the article, conditions are found on $A(t)$ which guarantee coercive solvability of the problem $v'(t) + A(t) v(t) = f(t) (0 < t < T)$, $v(0) = v_0 \in D(A(0))$, $f \in C_0^\alpha$; i. e., the existence and uniqueness of the solution $v(t)$ of this problem and satisfaction of the inequality

$$\|v'(t)\|_{C_0^\alpha} + \|A(t) v(t)\|_{C_0^\alpha} < k (\|f(t)\|_{C_0^\alpha} + \|A(0) v_0\|_E),$$

where $k > 0$ does not depend on $f(t)$ and v_0.   T. Yenikeyeva.

1/1

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Acc. Nr. *AP0049965*   Abstracting Service: Ref. Code
CHEMICAL ABST.*5/70*   *4R0051*

105580k Structure of electron-vibrational luminescence spectra in diamond crystals. Nedzvetskii, D. S.; Dymke, N. (USSR). *Opt. Spektrosk.* 1970, 28(1), 82–8 (Russ). Luminescence spectra of natural diamonds were run at 77°K. The interpretation of 2 systems of narrow lines at a low background in the ranges 4152 and 5032 Å is given. The electronic vibrational spectrum in the 4152 Å region is due to the interaction of the center with phonons of different vibrational branches. The fairly well resolved sharp lines in the luminescence spectra of diamonds are given by the character of the function detg. the distribution of the vibrational frequency satns. The spectra are affected by the interactions between the center and the local, or pseudolocal, vibrations. The system of lines at 5032 and 4959 Å are due to the quasi-local vibration (frequency 330 cm⁻¹). Only weak interactions occur between the centers and phonons in diamond crystals.
                                          H. Parizkova

REEL/FRAME
19801903

7

1/2   023   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--DESIGN OF PRESTRESSED RUBBER GOODS -U-

AUTHOR--DYMNIKOV, S.I.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1), 180

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--MECHANICAL STRESS, STRESS ANALYSIS, RUBBER

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0506   STEP NO--UR/0374/70/006/001/0180/0180

CIRC ACCESSION NO--AP0107111
                         UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0107111

ABSTRACT/EXTRACT--(U) GP-0-- ABSTRACT. THE EFFECT OF STRESSES IN RUBBER
GOODS OR METAL RUBBER COMPNS., RESULTING FROM THE GEOMETRICAL
CONFIGURATION OF THESE MATERIALS, IS CORRELATED WITH THEIR STRESS STRAIN
PROPERTIES. NONLINEAR STRESSES APPEAR IN SUCH COMPLEX MATERIALS
SUBJECTED TO SECONDARY DEFORMATION; E.G. SIMPLE SHEAR MAY CAUSE NORMAL
STRESSES TO APPEAR WHICH ARE SUPERIMPOSED ON THE STRESSES PARALLEL TO
THE DIRECTION OF THE APPLIED FORCE.

UNCLASSIFIED

1/2   031   UNCLASSIFIED   PROCESSING DATE--02OCT70
TITLE--CALCULATION OF PRESTRESS STATE IN RUBBER COMPONENTS IN SERVICE
   UNDER AVERAGE DEFORMATION -U-
AUTHOR--DYMNIKOV, S.I.

COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(1), 181

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CALCULATION, MECHANICAL STRESS, METAL TO NONMETAL BONDING,
   RUBBER, MATERIAL DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1989/0505   STEP NO--UR/0374/70/006/001/0181/0181

CIRC ACCESSION NO--AP0107110
                         UNCLASSIFIED

CIRC ACCESSION NO--AP0107110
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STEPWISE CALCNS. FOR DETG. STRESS
   STRAIN RELATIONS OF RUBBER SHAPES AND BONDED RUBBER METAL COMPONENTS
   WERE DESCRIBED. IN ALL THE DEFORMATION RANGES THE EFFECT OF THE INITIAL
   STRESS IS READILY DISCERNIBLE.

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UNCLASSIFIED

USSR   UDC 661.666:548.73:658.562

LUTKOV, A. I., VOLGA, V. I., and DYMOV, B. K.

"Methods of Determining the Average Size of Graphite Crystals in the Basal Plane"

Abstract: Methods are described for determining the average size of
graphite crystals in the basal plane. These methods are based on establish-
ing the temperature relationships of thermal conductivity and resistivity.
Measurement were made for isotropic, slightly anisotropic, anisotropic
and high anisotropic grades of graphite with average size determined by
both electrical and thermal measurements. The size of the crystals was
determined by using a modified Debye equation and by the relationship
between the average size of a grain and the temperature of minimum resis-
tivity. Both methods yielded similar values for the different forms of
graphite mentioned above. One table, nine bibliographic references.

1/1

USSR

UDC 546.26-162

LUTKOV, A. I., VOLGA, V. I., DYMOV, B. K., LUKINA, E. YU., and TAMARIN, P. V.

"Thermal and Electrical Properties of Pyrolytic Graphite"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 8, 1972, pp 1409-1416

Abstract: The authors studied the thermal and electrical properties of pyrolytic graphite produced by deposition of the products of pyrolysis of methane at 5-10 mm hg on the hot surface of polycrystalline graphite. Due to the comparatively low deposition temperature (2100°C), this pyrolytic graphite is initially high in defects. Following additional high-temperature annealing (3000°C and higher), the external appearance and x-ray structural analysis data of the material were similar to those of natural graphite single crystals. The heat conductivity, electrical conductivity, thermal expansion, and heat capacity of this graphite were studied. The electron heat conductivity was calculated at $T < 10°K$. The mean defect-free area diameter in the crystalline lattice in the direction of the a-axis was 15000-18000 A. Characteristic crystalline lattice temperatures were calculated ($\theta_1 = 200°K$, $\theta_2 = 1200°K$). The width of the forbidden zone in the direction of crystallographic axis c was 0.7 ev.

1/1

USSR

UDC 536.63.546.26-162

LUTKOV, A. I., DYMOV, B. K., and VOLGA, V. L.

"The Relationship Between Thermal Conductivity and Electric Conductivity in Graphite"

Abstract: It is known that the thermal conductivity and electric conductivity of graphite are not subject to the law of Wiedemann-Franz. Heat transfer in graphite is accomplished by phonons, electric conductivity is determined by the motion of electrons and vacancies. Nevertheless, a number of researchers has noted that at room temperature, the product of thermal conductivity and electric resistivity is to a certain degree constant. However, no attempts have been undertaken to link these properties at high temperatures.

In the article are presented results of the measurement of thermal conductivity λ and electric resistivity ρ, and the product of these values, $\lambda \times \rho$, has been calculated within the range of 80 to 2500°K for artificial graphites with a volumetric weight from 1.0 to 2.26 g/cm^3.

It was established that at low temperatures the values of $\lambda \times \rho$ of various graphites differ considerably. At room temperature, the values of $\lambda \times \rho$

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USSR

of the investigated graphites are close to one another. Finally, at $T >$ 1500°K, for all the investigated graphites with the exception of graphites with the least (1.0 g/cm^3) and the greatest (2.26 g/cm^3) volumetric weight, the value of $\lambda \times \rho$ is equal to 0.34-0.38 volt^2/degree and does not depend upon temperature.

This article has been deposited at the All-Union Institute of Scientific and Technical Information of the State Committee of the Council of Ministers, USSR, for Science and Technology and of the Academy of Sciences, USSR, Register No 3851-71 Det. (The article was received by the editors 9 Dec 1970, the abstract was received on 15 Nov, 1971. The complete text is 0.5-a.1. (expansion unknown), 9 references).

Graphite

USSR   UDC: 621.3.035.2

LUTKOV, A. I., VOLGA, V. I., DYMOV, B. K., DEMIN, A. V., RAKCHE-
YEVA, V. I., and PERKOVA, G. A.

"Investigating the Effect of Refractory Elements on the Thermal
and Electrical Conductivity of Graphite"

Abstract: The recent development of a method for graphite produc-
tion involving thermomechanical processing under pressure has led
to the diffusion of contaminants in the graphite. These contami-
nants react with the carbon to produce materials whose thermal
and electrical conductivity characteristics are very sensitive to
crystal structural defects caused by the contaminants. The pur-
pose of this article was to investigate graphite obtained by this
thermomechanical processing of coke into which refractory elements
such as Ti, Si, Zr, and B, were   introduced. The procedure
for measuring the thermal and electrical conductivity in the tem-
perature interval of 80-2500° K is the same as that used in an
earlier paper written by the first-named of the authors above, in
collaboration with others (Collection "Konstruktsionnyye materialy

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USSR

LUTKOV, A. I., et al., Tsvetnyye Metally, No 8, Aug 70, pp 48-51

na osnove grafita" --- Structural Materials Based on Graphite -- 4th
edition, published by "Metallurgiya," 1965, p 59). A brief de-
scription of the thermomechanical procedure is given. The authors
found that the heightening of the material's plasticity, the result
of the interaction between the carbon and these refractory elements,
affects the properties of the product. They found also that boron,
which is a close neighbor of carbon in the periodic table and has
a practically equal atomic radius, can replace the carbon in the
graphite lattice. It was noted that the presence of boron pro-
motes the graphitization process. Curves of the thermal and elec-
trical conductivity of the graphite as functions of the tempera-
ture in the graphitization furnace, for various concentrations of
the refractory elements, are given.

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104713n   Thermal conductivity, specific electrical resistance, and specific heat of compact graphites. Luktov, A. I.; Volga, V. I.; Dymov, B. K. (USSR). Khim. Tverd. Topl. 1970, (1), 132-43 (Russ). Thermal cond., K, sp. elec. resistance, ρ, and the heat capacity of graphites of different d. were detd. at 50-2700°K. Graphite of d. 1.0 was isotropic, whereas that of d. 1.9 was anisotropic. The av. dimension, L, of crystallites and the anisotropy of K, were calcd. by the Debye equation, $K_a = (^1/_4)cv_aL_a$, where r_a is the velocity of phonons along the a axis. K increased with temp., passing through a max. at 175-290°K. The ratio of K_{max} perpendicular, K'', and parallel, K', to the direction of compression, K'/K'', was 3.2 for graphite of d. 2.0 and 4.5 for graphite of d. 2.1-2.2. The plot ρ vs. temp. passed through a min. at 400-1150°K. The plot log K vs. $1/T$ consisted of intersecting lines.   GBJR

REEL/FRAME
19801704

TITLE--METHODS FOR MEASURING THE THERMAL CONDUCTIVITY OF GRAPHITES -U-

AUTHOR-(04)-LUTKOV, A.I., VOLGA, V.I., DYMOV, B.K., ANUFRIYEV, YU.P.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB. 1970, 36(3), 295-8

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GRAPHITE, THERMAL CONDUCTIVITY, MATERIAL TEST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/2138   STEP NO--UR/0032/70/036/003/0295/0298

CIRC ACCESSION NO--AP0125721
                    UNCLASSIFIED

CIRC ACCESSION NO--AP0125721
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONCORDANT RESULTS WERE OBTAINED
  BY MEASURING THE THERMAL COND. OF GRAPHITES USED IN CONSTRUCTION BY
  MEANS OF THE FOLLOWING METHODS: (1) AXIAL HEAT FLUX, (2) COMPARATIVE,
  (3) KOHLRAUSCH (1900), (4) POWELL AND SCHOFIELD (CA 33: 3649 PRIME5),
  AND (5) RADIAL HEAT FLUX WITH INDIRECT HEATING. THE THERMAL COND.
  PASSES THROUGH A MAX. IN THE 50-350DEGREESK INTERVAL. EXPTL. DETAILS
  GIVEN.

UNCLASSIFIED

USSR

UDC 669.71.018.9

DYMOV, G. D.

"Possibility of Intensifying Heating of the Charge in a Furnace for Melting Aluminum Alloys During Charging"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul. VILSa [Technology of Light Alloys. Scientific and Technical Collection of All-Union Institute of Light Alloys], No. 4, 1970, pp. 42-46, (Translated from Referativnyy Zhurnal Metallurgiya, No. 1, 1971, Abstract No.1 G149 by G. Svodtseva).

Translation: The influence of the charging rate and furnace temperature on the intensity of absorption of heat by the charge is studied. Curves of the dependence of final charge temperature and mean heat flux on furnace temperature and duration are constructed. The area of the furnace bottom must be increased to intensify the melting process.

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Radar

USSR

UDC: 621.396.96

DYMOVA, A. I. and VORONTSOV, Yu. A.

"Computing the Region of Passive Noises From the Earth's Surface"

Moscow, Radiotekhnika, No. 2, 1972, pp 1-5

Abstract: This theoretical article considers a radar station emitting a complex pulse signal in the direction of the earth's surface. The directional diagram of the station's antenna is assumed to be ideally conic, for the sake of simplicity in the analysis. Thus, the area of the earth's surface illuminated by the antenna radiation is an ellipse, which is considered to be a surface-distributed target creating a mixed signal at the radar receiver. Expressions are obtained for the effective reflecting area as a function of the angle of incidence of the transmitted signal and for the resolving capability of the station. A diagram from which the region of passive noise can be computed is shown, and it is demonstrated that a change in the resolving capability from 100 m to 75 m produces only a slight deformation in the passive noise region.

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1/2   010   UNCLASSIFIED   PROCESSING DATE--30OCT70
TITLE--REACTION OF COBALOXIMES WITH URACIL DERIVATIVES -U-

AUTHOR-(04)-BRODULINASHVETS, V.I., RUDAKOVA, I.P., DYMOVA, S.F.,
  YURKEVICH, A.M.
COUNTRY OF INFO--USSR

SOURCE--ZH. OBSHCH. KHIM. 1970, 40(3), 703-4

DATE PUBLISHED------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COBALT COMPLEX, OXIME, URACIL, CHEMICAL REACTION MECHANISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0877   STEP NO--UR/0079/70/040/003/0703/0704

CIRC ACCESSION NO--AP0124540
                       UNCLASSIFIED

CIRC ACCESSICN NO—AP0124540

ABSTRACT/EXTRACT—(U) GP-0— ABSTRACT. REACTION OF HYDRIDES OF
CUBALOXIMES WITH URACIL DERIVS. RESULTS IN INCLUSION OF CO IN THE URACIL
RING IN REACTIONS USING HYDRIDES OF DIMETHYL, AND DIPHENYLGLYOXIMATE
COMPLEXES OF CO WITH PYRIDIEN AND PH SUB3 P LIGANDS, AND URACIL,
URIDIEN, 2 PRIME, AHNYDROURIDINE, OR URIDINE,5 PRIME,PHOSPHATE AS THE
OTHER REACTANT. THIS AFFORDS A NEW ROUTE TO POLYNUCLEOTIDE
MODIFICATICNS. REACTION OF 0.28 G I IN AQ.   ETOH UNDER N WITH A SOLN.
OF 0.0167 G NABH SUB4 IN ETOH FORMED A BLUD GREEN HYDRIDE; 0.0445 G
URACIL IN H SUB2 O WAS ADDED AND THE MIXT. KEPT 45 MIN TO PPT. 75PERCENT
II. THE REACTICN MECHANISM WAS DISCUSSED.   FACILITY: VSES.
NAUCH. ISSLED. VITAM. INST., USSR.

Radar

USSR

UDC 621.396.963

BARANOV, I. M., DYMOVICH, N. D., SKVORTSOV, S. M., SOKOLOV, P. M., MOROZ, V. G., POGORELOV, B. P.

"Radar Display for Determining the Parameters of Atmospheric Inhomogeneities"

USSR Author's Certificate No 253178, Filed 11 Dec 67, Published 24 Feb 70 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9G51P)

Translation: A radar display containing a video amplifier and a plan position indicator has been patented for determining the parameters of atmospheric inhomogeneities. In order to represent the radar image of atmospheric inhomogeneities in the form of a series of concentric black and white rings, a coding tube is included between the video amplifier and the plan position indicator via a pulse amplifier. This coding tube converts the video signals from the atmospheric inhomogeneities into a train of pulses equal with respect to magnitude and different with respect to width and duty factor depending on the distribution of the instantaneous values of the video signal voltage. The joint effect of radial-circular scanning of the plan position indicator and rectangular pulse voltage create concentric black and white circles on the screen. The width of each circle corresponds to a defined interval of atmospheric inhomogeneity intensity. This facilitates determination of the inner structure of the inhomogeneity at the given point in time, and it permits

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BARANOV, I. M., et al., USSR Author's Certificate No 253178, Filed 11 Dec 67, Published 24 Feb 70 (from RZh-Radiotekhnika, No 9, Sep 70, Abstract No 9G51P)

information about the intensity of precipitation with respect to area to be obtained and zones safe for aircraft flights to be determined. There are two illustrations.

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USSR

UDC 621.396.967:551.501.81

BARANOV, I. M., DYMOVICH, N. D., SOKOLOV, P. M.

"Errors in Measuring the Intensity and Size of Meteorological Objects as a Result of the Finite Width of the Radiation Pattern of the Radar Antenna"

Sb. nauch. tr. Kiev. in-t inzh. grazhd. aviatsii (Collection of Scientific Works of Kiev Institute of Civil Aviation Engineering), 1971, vyp. 6, pp 22-25 (from RZh-Radiotekhnika, No 5, May 72, Abstract No 5G41)

Translation: A study is made of the effect of the space factor (the ratio of the volume filled by meteorological particles to the entire simultaneously reflecting object) on the magnitude and shape of the echo when rocking the beam with respect to the cross section of the cloud in the azimuthal direction. It is demonstrated that in order to decrease the errors caused by the finite width of the radiation pattern it is necessary to use a narrow beam antenna. There are 2 illustrations and a 3-entry bibliography.

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USSR   UDC 632.95

GOLYSHIN, N. M., ABELENTSEV, V. I., DVUKHSHERSTOV, M. G., MEL'NIKOV, N. N.,
VOLODKOVICH, S. D., TRENOV, P. P., DYNSHAKOVA, G. M., NOVIKOVA, V. A.

"Fungicide Mix"

Translation: Ethylenethiurandisulfide (13-40%) is added to a fungicide
mix   containing ethylenebisdithiocarbamates of Zn (36-55%) and Mn (20-35%)
for simultaneous control of several plant diseases. The preparation can be
used for preplant treatment of the seed of bean and vegetable crops with con-
sumption norms of 6-10 grams/kg of feed.

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USSR   UDC 632.95

MEL'NIKOV, N. N., SOKOLOVA, YE. M., TRUNOV, P. P., VORONKOVICH, S. D., DYSHAKOVA, G. M., GOLYSHIN, N. M., ABELENTSEV, V. I., LIGNINIS, N. S., FEDOSYENKO, L. G., ZAIKIN, B. A., DVURECHENSTOV, M. G., VISHEVLISKAYA, A. M., ORLOV, S. I., ZAVIZICH, A. P., and TALASH, A. I.

"Polycarbazin"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants -- collection of works), vyp 1, Moscow, 1970, pp 95-104 (from Ref-Khimiya, No 13, 10 Jul 72, Abstract No 13N593 by T. A. Belyayeva)

Translation: The effectiveness of polycarbazin (I) on apple scab and grapevine mildew equals that of zineb (II) and polyram-combi, while on cherry-fruit gray rot it equals Bordeaux liquid (III) (1 percent), but is ahead of II. I equals II and III for Clasterosporium infection of the cherry plum and tomato macrosporiosis. The decisive factor which determine the length of action of I is precipitation, which washes thepreparation off plants.

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USSR   UDC: 621.396.677.01

DYMSKIY, V. N., GAVRILOV, A. M., MIZGAYLOV, V. N., MOROZOV, G. A., CHONI,
Yu. I.

"Synthesis of Antennas on the Basis of Experimental Data"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970,
vyp. 104, pp 19-28 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12B7)

Translation: The authors analyze formulation of the problem of synthesizing
antennas as a problem of calculating the distribution of current density in
a region of predetermined geometric configuration with respect to a pre-
determined complex vector radiation pattern. In this formulation, the
problem reduces to solution of an operator equation. A physical interpre-
tation is given for the operators appearing in this equation; consideration
is given to the feasibility of determining these operators from experimental
data. Practical examples are analyzed. Four illustrations, bibliography
of six titles. N. S.

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USSR

DYMSKIY, V. N., MIZGAYLOV, V. N., MALYSHEV, L. A.

"A Method of Practical Synthesis of Antenna Systems"

Translation: A procedure for the formation of the radiation pattern of an
antenna system by utilizing experimentally recorded radiation patterns of
individual sources is discussed. The problem of synthesizing an antenna sys-
tem comprising discrete radiators located near a metallic body of complex geo-
metric configuration is stated and solved. The radiation pattern implemented
is represented in the form of a generalized Fourier series with respect to
natural harmonics. Estimates are made of the accuracy of the solution of the
problem of practical antenna synthesis. The theoretical principles are illus-
trated by a specific example of synthesis of an antenna system with respect to
a given radiation pattern comprising three radiators of the magnetic type lo-
cated on the conical junction between two cylinders of different diameters.
The statistical calculation results are presented. There are 3 illustrations,
1 table and a 6-entry bibliography.

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USSR

DYNAYEV, B. B.

"Method of Calculating the Two-Dimensional Normal Distribution"

Prikl. Matematika. Vyp. 3 [Applied Mathematics No 3 -- Collection of Works],
Irkutsk, 1971, pp 82-94, (Translated from Referativnyy Zhurnal, Kibernetika,
No 3, 1972, Abstract No 3 V11 by K. Karpov).

Translation: In order to calculate the function of the two-dimensional nor-
mal distribution

$$F(h, k, \rho) = \frac{1}{2\pi\sqrt{1-\rho^2}} \int_{-\infty}^{h} \int_{-\infty}^{k} e^{-\frac{1}{2(1-\rho^2)}(x^2 - 2\rho xy + y^2)} dx \, dy$$

it is suggested that the function

$$F_1(v; c; z) = \frac{1}{2\pi} \int_{-\infty}^{x} e^{-\frac{v^2}{2}} \int_{\frac{x-v+c}{z}}^{\infty} e^{-\frac{\tau^2}{2}} dx \, dy,$$

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— USSR

DYNAYEV, B. B., Prikl. Matematika. Vyp 3, Irkutsk, 1971, pp 82-94.

be used, related to it by the relationship

$$F(h, k, \rho) = F_2\left(k; \ -k + \frac{h}{\rho}; \ -\sqrt{\frac{1-\rho^2}{\rho^2}}\right).$$

It is demonstrated that with a good degree of accuracy, the values of function $F_2(x; c; z)$ where $c \geq 0$, $0 \leq z \leq 1$ can be calculated using the approximate formula

$$F_2(x; c; z) = A \cdot \exp\left\{-\frac{(x-\bar{x})^2}{2\sigma^2}\left[1 - \sigma^2(\sigma-1)\times\right.\right.$$

$$\left.\left.\times(\sqrt{z^2+1} \pm \bar{x})\left(F_1\left(\frac{x-\bar{x}+\frac{c/z}{z+1}}{\pi\sigma}\right)-0,5\right)\right]^{+1}\right\},$$

where the + sign relates to the case $x - \bar{x} > 0$, while the - sign relates to the case $x - \bar{x} < 0$. The table of values of A is presented with 4-5 significant digits, as well as values of $\bar{x}$, σ with 4 decimal points for $z = 0.05\ (0.05)\ 1$; $c/z = 0(0.2)\ 2.8$. The relative error resulting from the use of the approximate formulas is not over 0.6%.
2/2

Acc. Nr: Abstracting Service: Ref. Code:
AP0044473 CHEMICAL ABST. 4-70   NE 0000

70980e Investigation of germanium surface properties under
successive adsorption of gold and silver. Matsas, E. P.;
Dyner, L. L.; Primachenko, V. E.; Snitko, O. V. (Inst. Semi-
cond., Kiev, USSR). Surface Sci. 1970, 19(1), 109-18 (Eng).
Field effect and surface recombination velocity have been studied
on real Ge surfaces under adsorption of Au and Ag from aq. solns.
Adsorption of Au changes the properties of the Ge surface
radically. The effect of Ag deposition was insignificant. The
most essential result of the work is that subsequent adsorption of
Ag on a Au-covered Ge surface leads to the neutralization of the
peculiar properties caused by Au itself. The absence of mutual
influence of Ag and Au on the magnitudes of adsorption was es-
tablished by the radioactive method.   RCBD

REEL/FRAME
19771096

USSR

DYN'KIN, V. N., KIMEL'FEL'D, B. N.

"Construction of Nonbinary Arithmetic Codes Correcting Individual Errors"

Probl. Perecachi Inform. [Problems of Information Transmission], 1973, Vol 9, No 1, pp 22-25 (Translated from Referativnyy Zhurnal Kibernetika, No 6, 1973, Abstract No 6V472, by the authors).

Translation: The problem of finding the basic characteristic of an AN code correcting individual errors is solved. The characteristic is the value of $M_r(A, 3)$, defined as the least positive integer, the weight of the product of which by A in the system of notation with the base r is less than 3. The method suggested can be used for any r. Formulas are presented for calculation of $M_r(A, 3)$, when r = 5, 7, 11 and 8.

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USSR

UDC 512.3

DYN'KIN, V. N. and AGARONOV, D.A.

"Method of Expanding Polynomials in a Finite Field"

Translation: This article investigates questions involved in the reducibility of polynomials in the field GF(2). Author's abstract.

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USSR

UDC 51:621.591

DYN'KIN, V. N.

"Majority Decoding of a Class of Cyclical Codes"

Translation: Binary cyclical codes are analyzed, the test polynomials of which have the form $h(x) = p(x) (x^2 + x + 1)$, where $p(x)$ is a primitive polynomial of an odd power other than 1. It is demonstrated that these codes allow orthogonalization in two steps.

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USSR

DYNKIN, Ye. B.

"Regular Markov Processes"

Translation: This work reanalyzes the traditional presentation of the theory of markov processes, in particular: a) processes having not only random moment of death, but also random moment of birth are studied, b) the role of topology is reduced to a minimum, c) the primary object of study consists of heterogeneous markov processes. Regular markov processes are introduced and studied, and all called upon to play a role similar to the previous role of standard processes.

Let us discuss this in more detail. Suppose each $t \in T = [-\infty, \infty]$ corresponds to a measurable space $(X_t, \mathcal{F}(X_t))$ and suppose $(\Omega, \mathcal{A})$ is a space of elementary events. If with any $t \in T$ the measurable mapping $x_t(\omega) : \Omega \to X_t$ is assigned,

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USSR

DYNKIN, Ye., B., Uspekhi mat. nauk, 1972, 28, No 2, pp 35-64

it is said that random process $x_t(\omega)$ is fixed. Suppose for $\omega \in \Omega$ we define the interval of arbitrary type $\Delta(\omega) \subset T$ and suppose $E_t = X_t \setminus \{a_t, b_t\}$, where a_t and b_t are two different points from X_t (sets $\{a_t\}$ and $\{b_t\}$ are assumed measurable in X_t). If the random process $x_t(\omega)$ is such that $x_t(\omega) = a_t$ where $t < \Delta(\omega)$, $x_t(\omega) \in E_t$ where $t \in \Delta(\omega)$ and $x_t(\omega) = b_t$ where $t > \Delta(\omega)$, this process is called a random process in random interval $\Delta(\omega)$ here, for example, $t < \Delta$ means that $t < u$ with all $u \in \Delta(\omega)$). Here, E_t is called the space of states, a_t and b_t are ficticious states, X_t is an expanded space of states at moment t.

The pair (x_t, P), where x_t is a random process, while P is a probabilistic measure in Ω, is called a probabilistic process. Each set K of probabilistic measures in Ω corresponds to a set of probabilistic processes $(x_t K)$. The last set is called rigid if the agreement of any measures P_1, P_2 in N

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USSR

DYNKIN, Ye., B., Uspekhi mat. nauk, 1972, 28, No 2, pp 35-64

means that they are equal, where $\mathcal{N}$ is a σ algebra generated by $\{x_t\}$.

Suppose filtration $\mathcal{A}_t$ is fixed in Ω, i. e. the nondecreasing set of σ algebras $\mathcal{A}_t \subset \mathcal{A}$ ($t \in T$). If x_t with each $t \in T$ is measurable relative to $\mathcal{A}_t$, while (x_t, K) is a set of probabilistic processes, then the set $\mathcal{K} = (x_t, \mathcal{A}_t, \mathcal{K})$ is called a set of probabilistic processes with filtration. If $p = p(t,x;u,\Gamma)$ is the transition function from E_t to E_u ($t < u \in T$), where $p(t,x;u,E_u) \to 1$ as $u \downarrow t$ and if

$$P\{x_u \in \Gamma \mid \mathcal{A}_t\} = p(t, x_t, u, \Gamma),$$

P is almost probable in sets $\{t \in \Delta(\omega)\}$ with all $P \in K$, $t < u$ and $\Gamma \in \mathcal{F}(E_u)$, that set $\mathcal{K}$ is a called a markov set with conversion function p. A markov process is markov set $\mathcal{K}$, corresponding to class K, consisting only of one measure. Markov set $\mathcal{K}$ is called a markov class if for all $t < T$, $x \in E_t$ we can find measure $P_{t,x} \in K$ such that $P_{t,x}\{\alpha = t\} = 1$ and $P_{t,x}\{x_u \in \Gamma\} = p(t,x;u,\Gamma)$, where $\alpha(\omega) = \inf \Delta(\omega)$.

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USSR

DYNKIN, Ye., B., Uspeki mat. nauk, 1972, 28, No 2, pp 35-64

Markov process $(x_t, \mathcal{H}_t, P)$ with conversion function p is regular if A) E_t with any $t \in T$ is isomorphic to the Borel subset of the fully separable metric space; B) interval $\Delta(\omega)$ is closed on the right, open on the left; C) filtration $\mathcal{H}_t$ is continuous on the right; D) functions $p(t, x_t; u, \Gamma)$ of argument t are continuous on the right in Δ (o.n.P). The sets (classes) of regular processes are called regular sets (classes).

Suppose $\mathcal{K} = (x_t, \mathcal{H}_t, K)$ and $\tilde{\mathcal{K}} = (\tilde{x}_t, \tilde{\mathcal{H}}_t, K)$ are two markov classes. They are called indistinguishable if (o.n.P) $P_{t,x_t} = \tilde{P}_{t,\tilde{x}_t}$ for all $t \in \Delta$. Finally, $\tilde{\mathcal{K}}$ is a restructuring of $\mathcal{K}$ if for all $P \in \mathcal{K}$ (o.n.P), the relationships $t \in \Delta$ and $t \in \tilde{\Delta}$ are equivalent and $P_{t,x_t} = \tilde{P}_{t,\tilde{x}_t}$ with all t, except for the not more than denumerable set $\Lambda(P)$ of values.

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USSR

DYNKIN, Ye. B., Uspeki mat. nauk, 1972, 28, No 2, pp 35-64

For regular processes, the properties of strict markovness, continuity on the right along almost all trajectories and others are concluded. For the arbitrary conversion function, a regular restructuring is constructed, corresponding to its canoical class. Indistinguishability of rigid regular restructurings of any class $\mathcal{K}$ is proven.

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USSR

GER, B. A., DYN'KIN, Ye. M., and KACHMAN, A. N., Institute of Evolutionary Physiology and Chemistry imeni I. M. Sechenov, Academy of Sciences USSR, Leningrad, and All-Union Scientific Research Institute of Synthetic Rubber imeni S. V. Lebedeyev, Leningrad

"A Two-Chamber Diffusion Model of a Synapse"

Abstract: Considering the rapidity with which fast mammalian skeletal muscles can contract and relax, the following assumptions and approximations are made with regard to the neuromuscular synapse: 1) acetylcholine conc. (C_1) in the synaptic cleft (V_1) is reduced through a) enzymatic hydrolysis, b) diffusion outside the synapse; and c) diffusion into the postsynaptic structure (V_2); 2) V_2 is much larger than V_1; 3) V_1 is connected with V_2 by means of pores located on the postsynaptic membrane and occupying 10-20% of its area; 4) the area of contact between V_1 and the extrasynaptic space is so small that diffusion of the mediator outside the synapse can be disregarded; 5) ACh molecules can freely diffuse throughout the synapse; and 6) the total area of the post-synaptic membrane on which enzymatic hydrolysis of the mediator takes place is about 0.05% of the total area through which diffusion into V_2 takes place.

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USSR

GER, B. A., et al., Doklady Akademii Nauk SSSR, Vol 209, No 2, 1973, pp 508-511

On the basis of these assumptions and known facts, a mathematical model is developed which indicates that after each secretory discharge of ACh, there is an immediate abrupt fall of C_1 to C_2 due to diffusion into V_2, which is followed by a gradual reduction in C_2 due to enzymatic hydrolysis. ACh conc. in V_2 is always below a certain critical level, that is, the synapse is never overfilled. Thus, when $V_1/V_2 = 1/20$, the two-chamber system with diffusion pores can transmit impulses of a frequency 10 times as high as what can be handled by a one-chamber system with simple absorption.

2/2

USSR

UDC: 621.396.6-181.6(088.8)

DYN'KOV, B. N., YEVTEYEV, F. Ye., SAMARSKAYA, M. K., DMITRIYEV, P. A.,
Leningrad Electrical Engineering Institute imeni V. I. Ul'yanov

"A Device for Atomizing Thin-Film Microcircuits"

USSR Author's Certificate No 259209, filed 12 Jul 68, published 28 Apr 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V248)

Translation: A device is proposed for atomizing thin-film micromodules.
The device contains a vacuum chamber with a mechanism for raising the bell,
a drive mechanism for shifting the substrates placed on movable platforms
together with masks, a shielding screen, and a locating plate. To improve
visual observation of the operation of every atomizer, the upper part of
the shielding screen is made in the form of a cylinder equipped with an
observation port covered with a cylinder which is made from a transparent
material and is connected to a drive containing two braking belts which
fit in grooves on a locating ring. On the end of one of these belts is a
carrier which fits into the fork of a bimetallic loop connected to a source
of current, while the other belt wraps around the locating ring to keep it
from turning.

1/1

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UDC 669.15.018.44:669.782

BRATUKHINA, V. A., DYN'KOVA, YU. V., MARKOV, V. G.

"Effect of Silicon on the Properties of Pearlitic Steels Designed for Operation at High Temperatures"

Metallovedenive -- V sb. (Physical Metallurgy -- collection of works), No 14, Leningrad, Sudostroyeniya Press, 1970, pp 130-139 (from RZh-Metallurgiva, No 4, Apr 71, Abstract No 41630)

Translation: A study was made of the effect of Si on the mechanical and corrosion properties of steel 10 (1.16-3.43% Si), 15Kh (1.22-3.24% Si), 15Kh2 (2.25-3.31% Si), 15Kh1M (0.74-1.71% Si), 15Kh1MF (0.37-1.90% Si), Kh2M (0.25-1.47% Si). It was demonstrated that steel containing up to 1.8% Si has a satisfactory combination of mechanical properties. A higher content of Si in pearlitic class steel is inexpedient as a result of developing brittleness of the material. There are 7 illustrations, 5 tables, and a 9-entry bibliography.

1/1

USSR

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UDC: 681.327.66:621.317.757

OFENGENDEN, R. G., RATMANSKIY, R. Yu., ANDREYEV, O. M., BEREZIN, F. N., DYSENKO, B. N., MATSKEVICH, G. G., ODINETS, G. S., SHALEYKO, M. A.

"A Pulse Analyzer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 11, 1970, Author's Certificate No 265951, filed 25 Jan 68, p 41

Abstract: This author's certificate introduces: 1. A pulse analyzer with memory device of the periodic type, based for instance on a magnetic drum. The analyzer contains an analog-to-code converter, memory unit record and playback amplifiers, a data output module, and a control unit. As a distinguishing feature of the patent, the analyzer is simplified by incorporation of a device which records tags for the beginning and end of isolated segments on an auxiliary field of the periodic memory, a unit which codes these tags with its output connected to the recording amplifier, a tag playback amplifier, a device for decoding the reproduced tags, and a unit which passes pulses located in the isolated segments and which is controlled by the decoding device. 2. A modification of this pulse analyzer which has the distinguishing feature of automatic generation of control signals when predetermined number values are accumulated in selected channels. The analyzer contains a device for recording the indicated numbers on an auxiliary field of the periodic memory in phase with the arrangement of the data
1/2

USSR

OFENGENDEN, R. G., et al., Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy,
Tovarnyye Znaki, No 11, 1970

accumulated in the corresponding channels. Also incorporated in this pulse
analyzer is a comparison unit with its inputs connected to the circuit for play-
back of signals recorded on this field and to the playback amplifier for the in-
formation field, while its output is connected to the circuit which shapes the
control signals when the accumulated information is equal to or greater than the
predetermined numbers. 3. A modification of this analyzer which has the dis-
tinguishing feature of numerical integration of the data accumulated in the
isolated segments of the band being measured. The output of the pulse pass unit
is connected to the input of the comparison unit. 4. A modification of this
analyzer which is distinguished by its ability to record additional information
in the memory device during data accumulation. The unit contains a commutator
whose control input is connected to the track of a synchropulse field on which
a signal is recorded which divides the zones where the measured and auxiliary in-
formation are recorded on the memory unit of the analyzer.

2/2

1/2   016
UNCLASSIFIED
TITLE--THE USE OF THE ACHIEVEMENTS OF GENETICS IN MEDICINE -U-
PROCESSING DATE--11DEC70

AUTHOR--DYSHLOVOY, V.D.

COUNTRY OF INFO--USSR

SOURCE--ZH USHN NGS GORL BOLEZ 30(1): 1-8. 1970

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SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

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CIRC ACCESSION NO--AP0140671
UNCLASSIFIED

CIRC ACCESSION NO--AP0140671   UNCLASSIFIED   PROCESSING DATE--11DEC70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ACHIEVEMENTS OF GENETICS MAY BE UTILIZED FOR DISTINGUISHING THE ETIOLOGY AND PATHOGENESIS OF HEREDITARY DISEASES AND DEVELOPING METHODS FOR THEIR DIAGNOSIS, TREATMENT AND PREVENTION. FOR EXPLAINING THE ROLE OF THE HEREDITARY COMPONENT IN THE ORIGIN AND DEVELOPMENT OF ACQUIRED DISEASES AND FOR STUDYING THE MECHANISMS OF DEVELOPMENT OF ANY PATHOLOGICAL PROCESSES AT THE MOLECULAR AND CELLULAR LEVELS. THE PROBLEM OF CONTROLLING HEREDITARY DISEASES IS DISCUSSED. THERE IS A LIST OF FEATURES CONTROLLED BY MUTANT GENES LOCALIZED IN THE X CHROMOSOME OF MAN. DIFFERENT METHODS FOR STUDYING HEREDITARY DISEASES, SUCH AS INVESTIGATIONS OF TWINS, ARE DISCUSSED.

UNCLASSIFIED

USSR   UDC 611.8:534.612.1

ALEKSANDROV, L. N., DYSKIN, YE. A., ZLATISKAYA, N. N., KONKIN, I. F., DEV,
I. D., TIKHONOVA, L. P., FILATOV, A. I., and SHADRINA, N. S., Department of
Normal Anatomy, Military-Medical Academy imeni S. M. Kirov

"Condition of Some Nerve Structures After Exposure to Powerful Shock Waves"

Abstract: Cats were exposed to a powerful shock wave with an excess pressure
of 0.1 to 10 kg/cm^2 lasting about 0.1 sec. The effect was not lethal and
after the experiment the animals were externally indistinguishable from normal
cats. They were sacrificed at various times during the 30 days following
exposure to the shock wave and the nerves in the walls of the vena cava, diges-
tive organs, dura and pia mater of the brain and spinal cord, pancreas, and
thyroid were histologically examined. The medullated fibers and preterminal
portions of the receptors underwent the most distinct changes. The axial
cylinders were swollen and the contours uneven. Along the course of the fibers
were solitary or multiple varicosities. These reactive changes were largely
reversible. However, some of the nerve elements proved to be quite resistant
to the shock wave, notably the nonmedullated fibers, some afferent structures
(e.g., diffuse receptors), and encapsulated cell bodies.
1/1

DYSKIN, Ye. A.

O R I G I N A L   R E S E A R C H

THE CONDITION OF NEURONS IN THE AUTONOMOUS NERVOUS SYSTEM GANGLIA FOLLOWING
EXPOSURE TO G FORCES

The problem of gravitational stress [G forces] and its effect on
organs and tissues of the organism is drawing increasing attention of mor-
phologists.

After the many comprehensive morphological works describing
the vascular bed following hypergravitation, researchers turned
their attention to the anatomical changes arising with this stress
factor in the nervous system. The timeliness of such investigations
was due to the fact that, as shown by physiologists, disturbances
resulting from stimulation of the nervous system play an important
part in the mechanism of the effect of accelerations on the organism
(V.I. Babushkin, V.B. Malkin, V.V. Usachev, 1956; A.S. Barer, 1962;
A.R. Kotovskaya, S.I. Lobashkov, P.M. Suvorov, S.M. Simpura, G.F.
Khlobnikov, 1962; B.M. Savin, 1963, 1964, 1970, and others). For
this reason, along with the theory that interprets the effect of
accelerations primarily due to hemodynamic disturbances, more
recently an important place is given to concepts that attribute
primary importance to nervous system disturbances (B.M. Savin and
Z.K. Sulino-Samuylo, 1954).

It must, however, be noted that, unlike the vascular bed, there has not
been comprehensive investigation of the condition of the nervous system
following hypergravitation.

Among the investigations dealing with this matter, we must
mention the works of V.P. Kurkovsky (1953, 1954), B.S. Glushkov
(1963), D.I. Medvedev (1964), T.G. Ogancsyan (1965). More recently,
studies have been made of the changes arising under the influence of
longitudinal and lateral accelerations in the nervous system of
vessels under the guidance of Professor S.S. Mikhaylov (V.M.

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USSR

UDC 611:613.73

DYSKIN, Yu. A., and SAVIN, B. M. Military Medical Academy Order of Lenin Red
Banner imeni S. M. Korov, Leningrad

"Certain Problems in the Method for Investigating the Effects of Gravitational
Loads"

Leningrad, Arkhiv Anatomii Gistologii i Embriologii, Vol 59, No 7, 1970, pp 106-113

Abstract: Experiments were conducted on cats to analyze certain aspects of gravi-
tational load testing. The build-up gradient of an applied load is considered to
be as important a factor as the value, length, and direction of the load. Physio-
logical studies with animals show that load build-up and dissipation are of ex-
treme importance in gravitational effects. When cats are used, the centrifuge
radius must be at least 1.5 to 2 m. A special container was designed to keep the
body of the test animal in an exact position with respect to the acting forces, so
that local loads are eliminated. The animals were familiarized with the test
apparatus before they were subjected to the tests. Three test series were run to
study the structure of vascular and nerve formations in animals subjected to ap-
plied gravitational loads.

1/1

1/2   027
UNCLASSIFIED
TITLE--ON THE MECHANISM OF GUNSHOT CRANIOCEREBRAL INJURIES -U-
PROCESSING DATE--09OCT70

AUTHOR-(04)-ALEKSANDROV, L.N., DYSKIN, YE.A., OZERETSKOVSKIY, L.B., ALEKSEYEV, A.V.

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SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 5, PP 81-85

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CIRC ACCESSION NO--AP0108798   UNCLASSIFIED   PROCESSING DATE--09OCT70
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN THE PAPER THE RESULTS OF
EXPERIMENTS ON CADAVERS AND ANIMALS TO THE END OF STUDYING
CRANIOCEREBRAL CHANGES DURING GUNSHOT INJURIES ARE REPORTED. THE HIGH
SPEED FILMING AND IMPULSE ROENTGENOGRAPHY WERE EMPLOYED. THE
DEVELOPMENT OF A TEMPORY PULSATING CAVITY AND DISPLACEMENT OF AN ORGAN
AFTER BULLET PENETRATING IT ARE DESCRIBED.   KAFEDRY VOYENNO
POLEVOY KHIRURGII AND KAFEDRY NORMAL'NOY ANATOMII VOYENNO MEDITSINSKOY
ORDENA LENINA KRASNOZNAMENNOY AKADEMII IM. S. M. KIROVA.

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